THE GENESEE FARMER.

Vol. V. ROCHESTER, SEPTEMBER 19, 1835. No. 38.

Published by Luther Tucker.

TERMS.—The Farmer is published every Saturday, making an annual volume of 416 pages, to which is added a Title-page and Index, at the low price of $2,50, or $2,00 if payment is made at the time of subscribing.

☞ All subscribers must commence with the volume, Jan. 1, or with the half volume, July 1. No subscription taken for less than six months.

THE GENESEE FARMER.

SATURDAY, SEPT. 19, 1835.

☞ Subscribers, in making remittances, or sending directions respecting their papers, by letter, will save us much labor and prevent mistakes, by always mentioning the Post-office to which the paper is directed. We keep no alphabetical list of subscriber's names, but have our accounts arranged under an alphabetical list of Post-offices. It is therefore only under the name of the Post-office that we can conveniently find the name of a subscriber.

Edinburgh Quarterly Journal of AGRICULTURE.

From an article on the uses and (agricultural) management of Heath (*Erica vulgaris?*) by William Hogg, we copy a paragraph which will prove interesting to the lovers of Natural History.

"Moor-fowl have their permanent residence only where Heath prevails —I have often pitied them in their exertions to defend their nests from the corbie-crow and other relentless plunderers; but as they are not fitted by nature for a state of warfare, they are by no means a match either for the hawk or the corbie. I have often seen these ravenous birds in the act of spoliation;—one case I cannot help here relating: A crow was attempting to rob a nest of its eggs. The moor-cock with great clamor, attacked her in the air, knowing no doubt what was her design. I saw the crow cared neither for his noise nor his attack. After sundry rencounters, the crow darted down upon the nest, and the hen left it with a loud scream. They both then set upon the crow, when the latter, finding she could not get the eggs sucked with that deliberation and leisure which gives a feast its due relish, flew over the heath, and I thought she was going to relinquish the design as impracticable. I was mistaken. *She returned in a short time with another crow*, and I then saw they would immediately carry their point. The cock came in contact with one of the crows in the air; the crow had clasped him in her talons, and when she loosened her hold, the moor-fowl fell straight to the ground. I thought he was killed; and ran to see what method of destruction the crow had so instantaneously inflicted. He was not dead, but cowering among the roots of the long heath, and was sore hurt by closing with his antagonist in the air. When I approached he took to the wing; but I saw his feathers were much disordered. Both parties left the spot, and when I left it, I saw the crows return, and without further molestation they no doubt accomplished their design. I have often relieved the grouse in the same manner; but it was always only a temporary delay to the calamity; for as soon as the nest is discovered, these ravenous birds never give up their design till it is pillaged."

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We continue our extracts from the Edinburgh Quarterly Journal of Agriculture.

On Steaming Food for Horses.

An engraving on wood representing an apparatus for steaming with a close boiler is given, which we omit for the present; and only select such parts of the article as relate to the general principles and advantages of preparing food in this manner for live stock.

"It has been ascertained, though perhaps not generally known, that *grain of any kind cannot be dressed or cooked by dry steam applied to the dry grain.* If the steam is at a low pressure, or a little above that of atmospheric, a species of parching is produced on the grain so treated; and if steam of very light pressure is applied, the grain may be entirely carbonized. An intermediate and very simple process, has however been found, whereby grain of any sort can be completely boiled, which is done by *soaking* the grain in water for a period of from six to twelve hours, according to its state of dryness; and then placing it in the receiver described for steaming roots, and applying steam for an hour, the grain will come out completely boiled. From this it may be inferred, that each grain becomes a little cauldron, containing as much absorbed water as serves to boil it by the application of steam; but whatever be the *rationale* of it, we are thus provided with a simple and efficient steaming and boiling apparatus, applicable alike to the cooking of juicy roots or tubers, and dry grains."

"That horses on a farm may be kept more economically on prepared food than in the state and manner in which food is usually administered to them, we have no doubt. The fact however, will soon be ascertained in consequence of the premium which the Highland Society has just now announced on the subject. The results of the experiments which some farmers will make, will we fondly anticipate, prove the facility of preparing food, and economy in the use of it. We have the authority of the owners of some of the coaching and posting establishments in Edinburgh, for stating that the saving which will arise from the use of prepared food, in the keep of forty horses, will amount to 140*l.* a year. We have also the high authority of Mr. Dick, the Professor of Veterinary Surgery in Edinburgh, for saying that *the general health of horses under work, is much better on prepared than unprepared food.*

"It will appear obvious, says Mr. Dick, that the grand desideratum is to give food containing as much nutriment. and in as small bulk, as is consistent with the economy of the animal. If this problem is solved, it will follow, as a corollary, that it will be important to give that food which has been found best suited to its proportions, in such a state as is best suited for digestion. This is a point however, worthy of consideration; and naturally suggests the question, How is the body supplied with nourishment by taking in food into the stomach? The common notion is, that much depends, as I have indeed before mentioned, on the hardness of the food; and it is a common saying, in order to show off a horse which is in condition, 'that he has plenty of hard meat in him.' Now this is a very silly and erroneous idea, if we inquire into it; for, whatever may be the consistency of the food which is taken into the stomach, it must, before the body can possibly derive any substantial support or benefit from it, be converted into chyme—a pultaceous mass; and this as it passes onwards from the stomach into the intestinal canal, is rendered still more fluid, by the admixture of the secretions from the stomach, the liver, and the pancreas, when it becomes of a milky appearance, and is called chyle. It is then taken into the system by the lacteals; and in this fluid, this soft state, and in this state only, mixes with the blood, and passes through the circulating vessels for the nourishment of the system.

"Now if the hardest of the food must in this manner be broken down and dissolved before it can really enter into the system, it must appear evident that something approaching to this solution, if done artificially, would greatly aid the organs of digestion in this process, and that thereby much exertion might be saved to the system, and at the same time nourishment would be rapidly conveyed into it. It is with this view that I would recommend the general adoption of cooking food for horses."

Smut in Wheat.

The following extract from an article in the New York Farmer of 1831, by one of the correspondents of that paper, will show the necessity of guarding carefully against every means by which seed wheat can become infected with this disease. Results similar to this are frequently witnessed.

"A neighbor of mine, having purchased some very excellent seed wheat, the same was delivered in the farmer's bags of whom he had bought the wheat, with a promise that he, the purchaser, would return the bags immediately after the grain was sown or deposited in the drill. My neighbor complied with this request, and having drilled about half the quantity, from those bags in which he had received the wheat, he took opportunity on the following day, which day had been very wet and unfavorable for drilling the remainder, to empty those bags, in order that they might be returned. Thus was this excellent, clean, and till then unadulterated seed wheat, put into his (the purchaser's) own bags, which before had contained some very foul and *diseased smutty wheat*, as he, together with his farm servants, acknowledged the fact. On the third day the remainder of the wheat was drilled on the same soil, and in the same field, but not from the *clean bags* of the seller of the seed wheat.

"Now, mark the result at harvest. The clean seed wheat, which had been emptied into the farmer's own filthy smutty bags, produced about *one twentieth part of smutty ears*; whereas, from the former day's drilling, not a *single ear* of smutty wheat could be found."

☞ The American Institute at New York, holds its fair on the 16th, 17th and 19th days of October.

Hints on Gardeniug for Septem-

BER AND OCTOBER.

Early cabbages, for the next season, may be sown about the middle or during the latter part of September; the plants should afterwards be set out three inches apart each way, in a sheltered situation, so that they may be covered with a frame and sash during winter, to be finally transplanted in spring.

Early cauliflowers should be treated in a similar way; but as they are less hardy, they require some additional care. They should be sown towards the latter part of September, in a rich soil; about a month afterwards they are to be transplanted in a bed three or four inches asunder, this bed is afterwards to be covered with a sash of glass. The plants should be properly shaded and watered for a few days, until they have taken root. The frame should be lined outside with horse dung, before cold weather sets in; and during the severest weather of winter the plants should be well protected from frost by straw or mats. They should have plenty of fresh air whenever they are not in danger of freezing. They are to be set out in the open ground in a rich soil, in spring, and by proper care may be in perfection in the early part of summer.

Strawberries may be transplanted any time in in the early part of autumn; and soils affected by the heaving of frost, should be trodden firmly about the roots, which will prevent much wet from penetrating the ground, and consequently the roots from being thrown out by freezing. This part of the operation, which is very efficacious in preventing heaving by frost, requires the ground to be so dry, as not, if possible, to be adhesive.

Onion beds. This month is a very proper time to set out young top onions. The soil best adapted to an onion bed, is one that is rich, and mellow at the surface, but this should not extend more than two or three inches deep, as when the roots run deeper than this, they do not form so large nor such compact bulbs. The surface alone should therefore be stirred and kept mellow, while the soil below should remain hard and untouched.

Ripe onions should now be collected and preserved. After removing them from the soil, they should remain a few days upon a dry piece of ground, after which they will be fit to pack away.

Lettuces may be sown for spring use, to be protected however from severe white frosts in winter and early in spring.

Celery should be earthed up as it advances in growth, at the same time carefully avoiding covering the heart, or points of the growing parts. It should be done in dry weather, being careful not to bruise the stalks, or else they will be liable to decay.

In the latter part of October, gather roots and vegetables and secure them for winter, taking care of those first which are most tender, and those more hardy afterwards. Roots may be buried, or may be packed away in dry sand in a cellar.

Preserving Grapes through winter.—The following method we have known to be tried, and can personally attest its efficacy, having partaken of this delicious fruit in a complete state of preservation during the depth of winter: First provide a quantity of sawdust, and bake it till it is thoroughly dry; then gather the grapes in bunches when they are fully ripe, and dip the ends of the stems in melted pitch; place a layer of the saw-dust in the bottom of a jar, on this deposit a layer of grapes (always in bunches), then a second layer of saw-dust, and a second of grapes, and so on till the jar is full. A lid is then to be fitted on the jar, and sealed air tight with wax or tallow. If made of wood, the lid should be painted, in order to render it more perfectly impervious to the air. The jars are to be kept in a cool dry place, where they will not freeze, and the fruit will keep till spring.

In the Flower Garden,

Crown imperials are to be planted early—herbaceous perennials may now be increased by parting the roots—those from seed this season may be transplanted in cloudy weather—shrubs and ornamental trees may be pruned and transplanted.

Plant all the *hardy* kinds of bulbous or tuberous flower roots,—such as the crocus, crown imperial, gladiolus, hyacinth, iris, jonquils, lilies, narcissus, and tulips. Next month is the best time for transplanting the Pæonia.

Agricultural Societies in Scot-

LAND.

We are indebted to some unknown friend in Canada, for a copy of the "15th Annual Report of the United East Lothian Agricultural Society," made in December last, from which we copy the following articles:

Comparative Value of Manures.

Report of Competitors for Premium of £20 for the most satisfactory experiment in the application of different sorts of Manure.

AIMSFIELD MAINS, Dec. 5, 1834.

Dear Sir—Agreeably to the written intimation which I made to you some time ago, I now beg to state, that in order to ascertain the relative value of Street Dung, Rape Dust mixed with bruised Bones, and Farm-yard Dung, I selected twelve ridges in the middle of a field for the experiment, allotting four of these ridges to each portion. A furrow tile drain separated the lots, to which I applied the respective manures in the following proportions per Scotch acre:

1st. 20 cart loads of Street Dung, at 5s. 6d.....£5 10 0
2d. ½ ton of Rape Dust, at 110s. £2 15
3 qrs. bruised Bones, at 19s. 2 17
5 12 0
3d. 16 cart loads of Farm-yard Dung, at 7s.....5 12 0

The whole turneps brairded beautifully, and from the first, till the time of lifting, it was impossible to decide which would be the weightiest crop. I therefore determined, on the last week of November, to take up alternate rows of the whole, and weigh each separately, after the roots and tops were taken off, and the result was found to be as follows:

	cwt.	lb.
1st. Half a Scotch acre manured with Street Dung, produced of common globe turnep,.....	301	92
2d. Do. with Rape and Bone Dust,....	304	99
3d. Do. Farm-yard Dung,.....	312	30

I hope the above will be sufficiently explanatory of the experiments, so far as tried.

I am, dear sir, yours faithfully,

JOHN BRODIE.

LINKFIELD, Nov. 15, 1834.

Sir—I hereby send you the weight of four acres of Swedish turneps, grown on the farm of *Linkfield*, crop 1834, after being topt and rooted, the ground manured as follows:

1st. One ace with very fine home-made Dung, 12 double cart loads, say 7s. 6d. per cart,.....£4 10
Weight of turneps, 27 ton, 14 cwt.
2d. One acre with Dunbar Street Dung, 12 double carts, not counting carriage, 7s. 6d.....4 10
Weight of turneps, 23 tons, 14 cwt.
3d. One acre with Bone Dust, without carriage,.....4 10
Weight of turneps, 26 tons, 7 cwt.
4th. One acre with Rape Dust, without carriage,.....4 10
Weight of turneps, 25 tons, 11 cwt.

Your laying the above before the Agricultural Society, will much oblige yours truly,

JAMES ALLAN.

Chevalier and Common Barley.

Report of Experiments made with the view of ascertaining the Character and Value of Chevalier Barley for Malting and Grinding, as compared with Common Barley, when applied to the same purpose.

FENTONBARNS, Dec. 5, 1834.

A quarter of the Chevalier kind was sown in the middle of each of two fields of the common sort, and at harvest, adjoining ridges of the two varieties, in each of the fields, were cut down and secured from each other with the greatest accuracy; which, when thrashed, the produce was found as stated below. Both fields had been young grass, pastured during summer, 1833. The soil, a dry loam of good quality, being in that respect something similar, although about a mile distant from each other. The seed allowed per acre over the whole was, as near as possible, fourteen pecks, and sown, the field marked No. 1, on the 25th, and No. 2, on the 28th March. Both fields were alike ripe early in August, the common barley being all cut by the 8th, and the chevalier by the 12th, and the whole secured in the stack by the 20th of the same month; but the latter sort had been about a week later of getting into ear than the former, and was the same length of time behind in being ready for the sickle.

ROBERT HOPE.

Produce per acre of the two sorts on No. 1.

	Weight per bushel.	Total per acre. qrs.	bus.	pks.	Straw per acre, 16 lbs. in the stone.
Common Barley, best,	51 lbs.	6	2	3	208 stones.
Do. do. inferior,	48	1	1	2	
Chevalier Barley, best,	53	7	6	1	241 ——
Do. do. inferior,	51	0	2	0	
Difference in favor of the Chevalier,		1 qr.			33

Produce per acre of the two sorts on No. 2.

	Weight per bushel.	Total per acre. qrs.	bus.	pks.	Stones of straw.
Common Barley, best,	51 lbs.	6	7	2	245 stones.
Do. do. inferior,	48	0	3	0	
Chevalier Barley, best,	53 1-2	8	0	0	277
Do. do. inferior,	51 1-2	0	1	2	
Difference in favor of the Chevalier,		7	8	1	2	32

NOTE.—The crop on No. 1 was sooner and more laid by the weather than that of the other field—the straw was consequently softer, and lighter when brought to the scales; and the value of barley for grinding is held to be indicated by its weight. And the relative quantities of the two kinds in both fields, as well as the weight of straw, came wonderfully near to each other, al-

fording something like a proof of the accuracy of the experiments.

With regard to the malting properties of the Chevalier variety, Mr. Crawford, Malster, North Berwick, in the most liberal manner, by a letter of the 4th current, has kindly enabled me to state the following important facts bearing on the subject:

Extract of Mr. Crawford's Letter.

"Dear Sir—I had 74 quarters of Chevalier, and 50 quarters of Common Barley, bought in several parcels from different individuals, whose soil and situation was very much alike. The Chevalier Barley required two days longer in the operation of malting than the Common, and it yielded one per cent. more malt, and sold at 1s. 6d. per quarter higher price, than the malt from the Common Barley, on the average of the two quantities. (Signed) John Crawford.

Table of Produce, &c.

Of Varieties of Wheat, shown by Mr. Hope, on 10th October, 1834, with the average of valuations, by three Corn Merchants, made according to the Market Prices of that day.

	Name of Variety.	Produce per acre.	Weight per bus. undressed.	Weight per bus. dressed.	Straw. Tron Weight.	Prices.
1	Ross-shire Wheat,	40 1-2 bus.	61 lbs.	63 1-2 lbs.	178 stones.	21s. 8d.
2	Peaston Red,	46 1-4 "	61 "	63 3-4 "	203 "	20s. 6d.
3	Woolv Eared,	46 1-2 "	60 1-2 "	63 1-4 "	190 "	21s. 2d.
4	Chapel White,	36 1-2 "	61 3-4 "	64 "	162 "	21s. 6d.
5	Winslaw, (from England,)	40 3-4 "	61 1-2 "	63 3-4 "	161 "	22s. 0d.
6	Hunter's,	44 3-4 "	61 "	63 1-2 "	194 "	21s. 6d.
7	Mixture of the above,	41 3-4 "	61 1-4 "	63 3-4 "	174 "	22s. 6d. *

* The average of valuations, given in separately, by Messrs. Glen, Aitkin and Hay.

Exhibition of Fruits.

Since our last notice, there has been a remarkably fine show of Fruit at Mr. Swan's Store, consisting of Peaches, Plums, Apricots Nectarines, Apples, Grapes, &c. in great variety. The exhibition will be continued, and those who have superior varieties of Fruit are invited to present them for exhibition. We learn also that a committee of the Horticultural Society are making preparations for a general exhibition, which is to take place soon.

Mammoth Cheese.

We are informed that Col. *Thomas S. Meacham*, of Richland, Oswego county, who keeps 154 cows and has made this season 300 cheese weighing 125 lbs. each, has made one weighing FOURTEEN HUNDRED POUNDS, which he intends to present to the President of the United States. He has also made several, weighing EIGHT HUNDRED POUNDS each, one of which he intends for the Vice President, one for Gov. Marcy, and one for each of the cities of New York, Albany, Troy and Rochester.

A Horse killed by Bees.

Extract of a letter from a subscriber at Lebanon, (Pa.,) to the publisher:—

"An occurrence took place this day on a farm adjoining mine, a knowledge of which may be useful as a caution to your readers against a similar accident. A stranger hitched his horse to a garden fence to which was attached a scaffold or benches and roof, under which were several hives of bees. The horse, it is supposed, kicked or shook the fence, which enraged the bees so much that they attacked the horse, and before he was or could be taken away, he was so badly stung that he died in six hours."

From the Farmer and Gardener.

Liming in Lehigh.

In speaking more particularly of Lehigh county, it may be assumed, that the introduction of the use of lime in farming, and the culture of clover about 20 years ago, wrought a most salutary revolution, and saved the second and third rate lands from being deserted for the far west. Even since that period agriculture is rising. Every summer adds to the number of solid and capacious barns, and old ones are enlarged. A considerable part of the county, especially on the borders of the Lehigh and its tributaries, is limestone land, but the trouble and expense of carting the stones the distance of 14 miles is not thought too much, thus almost the whole of our county is provided with this commodity. As soon as winter sets in, or as often as during summer the other farm operations are suspended, the quarries present a lively scene, and wagons or sledges are seen toiling along up and down through the country, broken and hilly as it is in many parts. The consequence is, that you see beautiful farms not only in hollow lands, but in situations where you never would look for them, on the tops of the mountains as well as on their declivities. Wheat however is not the only staple article; we produce a great quantity of rye for sale and home consumption, for man and beast; for be it remembered that we eat rye bread in preference, even when we have both sorts on the table. The effect of lime upon rye land is quick and immediate, hence whoever is improving his land begins with rye. On the Lehigh land quarried limestones are sold at the quarries for 25 cents per ton. In other sections, the common way is for farmers to do all the labor themselves and pay to the owner of the quarry 6 cents for every ten bushels of quicklime they draw from the kiln, or they engage hands paying to them from 1 to 1¼ cents per bushel of quicklime, the hands to find their own tools and powder where necessary—this is in addition to the fees of the owner of the quarry. The work at the kiln to be done by the farmers. If you wish to buy quicklime you can have it deposited on the fields at ten cents per bushel and upwards, according to distances. We put from 40 to 60 bushels on the acre, repeating the operation every five years. From the time that stone coal from Mauch Chunk has been furnished in abundance along the Lehigh canal, and that its use in burning lime has been understood, agriculture has received a new start. Previously, the scarcity of fuel—though rather prospective than actual, operated as a check upon the universal use of lime. Now the coal is mixed with the lime stones, and no more wood is required but what is necessary to ignite the coal, which may be done with 1 or 1½ cords, thus not only a mass of fuel is saved, but a great deal of hard labor—the coal when once fairly burning requiring no farther attendance.

Timothy is not much raised on dry land, as its effect upon the land is not so beneficial as that of clover. Common rotation, 1st. clover, 2d. Indian corn, 3d. oats or flax, and potatoes, manure, 4th. wheat, 5th and 6th. clover, 7th. wheat, without manure; 20 bushels of wheat—50 bushels of Indian corn, 2 tons of clover per acre, are good crops, though there are many instances of more having been produced. Average somewhat below this.

For the benefit of such as wish to sprout a few seeds of gama grass, let me add my recipe. Split the seed with a small chisel, put the kernel in a tumbler with sand, keep it moist, and in 3 days, if the seeds are not covered too deeply, the grass appears. The splitting is easily done. The seed of gama grass is in the shape of a cylinder, on the surface of which you will observe a spheric triangle, two sides being formed by seams, and the third by the base of the seed, but the two sides or seams, one not quite connected with the base, make the connection with the chisel or knife, and the triangle will fall out like a trap door, the kernel adhering to it; take care not to separate it further, or injure it, which is very easy to avoid.

From the British Farmer's Magazine.

Remarks on the Scarlet Trefoil.

Addressed to the Conductor of the Gardener's Magazine, and communicated by Mr. Loudon.

As the scarlet trefoil, (*trifolium incarnatum*) has already engaged the attention of agriculturists, and from its valuable properties is likely to be brought into general use, permit me through the medium of your periodical, to offer a few observations on the best mode of cultivating it.

It is well known, that all the clovers like a solid bottom; and from experience it appears that such is more particularly the case with the scarlet trefoil. When the land upon which it has been sown has been rendered fine and light, by repeated ploughings, the crop has frequently been an entire failure. Such failures have been attributed to the depredations of grubs; but there is much reason to believe that, the plant perished in the winter, owing to the lightness of the soil, as I have never heard of a single instance of failure when the seed was committed to an unploughed surface. In the beginning of October, 1833, I sowed a plot of garden ground, the soil being strong and rich, upon a chalk bottom. The seedlings came up well; but, in the course of the winter, all perished, with the exception of a single plant. In September, of the same year, Col. Beach sowed a few acres in a field, about a hundred yards distant, which he had ploughed and dressed for the purpose, the soil in this case being of a similar nature to that mentioned above, and here again the crop was a failure. At a distance of about two hundred yards, and upon soil precisely similar, and in the same season, a stiff, unploughed wheat stubble produced as fine a crop as could be desired. The farmer who had this crop, had previously pursued the same plan, and had realized from his produce upwards of £40 per acre! I find, also, that the crops have frequently failed in the county of Essex, where the ground had been ploughed before sowing. In September last, I sowed four and a half acres upon a barley stubble, without any preparation whatever, and there is an abundant plant. I do not mean to assert positively, that no crop will follow after ploughing; but experience proves that success is very doubtful when this is done.

With respect to the properties of the trefoil, I do not believe that there is a more hearty green food in existence. Cattle are extremely fond of it. Farm horses, during their spring work, may be kept in the highest condition upon it, and after affording abundant feed, may be cleared off in time for turneps or barley, both of which, upon trial, have succeeded perfectly well after trefoil.

Should these observations prevent disappointment, or be the means of drawing the attention of the farming interests to the facts of the case, it will be satisfactory to their friend,

MATTHEW HARRISON.

Church Oakley, Near Basingstoke, November, 1834.

P. S.—Scarifying the ground has been found to answer well; and where the surface is foul, it is certainly advantageous.

COMMUNICATIONS.

Parish's Improved Patent Bee HIVE.

Mr. P., the ingenious inventor of this excellent article, called on me last week to look at his hive, which he had exhibited on the walk in front of the City Hotel, on the margin of the canal, among the thickest part of the buildings, canal boats and shipping of Buffalo. It had in it a fine swarm of bees busily employed in their labors; and although they had arrived only the day before from Lockport, seemed as much at home as if bred there. He told me that he had brought them from Rochester on the canal, and had stopped at the villages on the route for exhibition. I like the hive exceedingly. It is convenient, portable, perfectly safe, and in fact a very pretty piece of furniture.

The *principle* of the hive is not new, but the operation of it quite so. Those who are at all curious in the management of their bees should forthwith adopt his plan. Mr. Parish has fully described the hive in a late number of this paper, of which a very good general idea is given. He sells the right to any one to use them for five dollars, and the hive may be constructed to cost from five to fifty dollars, and of sufficient size to hold twenty ordinary swarms. I like the plan so well that I have purchased the right to use it, and engaged him to make me one hive as a sample. Not that I do not succeed with my own plan of keeping bees in a dark room, for I do succeed very well, but the idea of this hive seems to be founded on a just knowledge of the natural history and habits of these useful insects, and is ingenious and convenient in its arrangement. "Bees after all are queer things." They will not work equally well with the same management in different locations and under different circumstances. They require some attention at times, and an occasional variety of treatment as their whims, caprices or the season may be. Yet no one of good observation can mistake their proper management, and with very trifling attention they will amply reward their owner for his trouble.

In saying thus much of Mr. Parish's useful invention, I cannot but hope he may meet with ample success to repay him for his time and expenses in securing to the public so valuable an improvement. ULMUS.

Fruit.

The present is a most prolific fruit season. The country bordering the great lakes and Niagara river is perhaps the very best fruit country in America, as but one year has been known since its settlement (1834) in which the fruit has failed, and even then some orchards yielded a tolerable crop. All the fruits which have already ripened have been in uncommon abundance, and those yet to ripen were never more prolific. Even the crab apple and wild plum, of which there is the greatest abundance between Tonawanda and Niagara Falls, and on the islands of the Niagara, are most abundant. The nut trees too, such as the black walnut, butternut, hickory and beech nuts, are full almost to breaking. Indeed, the year 1835 will hereafter be referred to as an era in the annals of fruit bearing. The Niagara frontier above the mountain* at Lewiston is not the best country for the peach, nectarine and apricot, but for the other fruits of our climate, no country is superior. *Such* magnificent plums I never saw elsewhere. I have just brought in a large fruit dish of plums from my garden of a description that I never saw before, nor are they described in any work I have read. I found the tree, then very small, in the front door yard of the house I occupy when I first removed into it six years ago. It stood and bore fruit one season after I possessed it, and although I only obtained two or three of the plums, I thought them of such superior quality, that I determined to remove the tree into the garden back of my house and preserve it. I did so, and it is now a beautiful tree in fine bearing, having perhaps at this time half a bushel of most choice and perfect fruit upon it.

The plum is as sweet and luscious as a yellow gage, about the size and shape of a pullet's egg, but deeply cleft in one side. The color varying from a deep rich purple, almost black at times, around the lower part, and fading as it approaches the stem and towards the cleft, into a light purple or red ground, and from that to the stem and into the cleft to a bright green and flesh color, beautifully mottled and speckeed with red and yellowish flecks. At the insertion of the stem it is nearly yellow. The whole covered with a light bloom or powder. It is also a clingstone.

I am thus particular in its description, because I deem it a most valuable acquisition to the plum variety. I intend to propagate it in my own grounds, and have some flourishing trees now grafted with it. I shall be happy to see it more extensively cultivated, and out of regard for my excellent and highly valued friend at Albany, who has added so much to our valuable fruits, I call it the BUEL plum. I intend the coming winter to send him some thrifty scions for propagation. It is no doubt a seedling, as other common kinds were planted near it.

My Isabella, Catawba, Munier and Burgundy grapes are very full, and promise abundantly. Indeed, I last year had abundance of grapes, although the fruit was mostly cut off. ULMUS.

Proper Time for Cutting Timber.

BY JOSHUA HOWARD.

MR. TUCKER—I observe in your paper of the 22d August last, that you are calling the attention of your patrons to the durability of posts, &c. During the last twenty years I have been engaged more or less in the preservation of timber, and from my experience am able to say with confidence, the old opinion of English writers to the contrary notwithstanding, that the best time to cut timber to ensure its durability, is when the tree is in its GREATEST VIGOR; and in this latitude, say middle of June—then the sap is in its most fluid state, and entirely escapes through the several pores of the tree. The idea that the sap of a tree recedes to its roots during winter, is in my opinion a mistaken notion. The sap is distributed through the tree in winter the same as in summer, and circulation never ceases, except with the life of the tree. The sap in winter is less in quantity and thicker, and owing to its stagnant state, remains in the timber when it is cut in winter, and becomes the principle of its destruction. Let timber for rails, posts, or other purposes, be cut when it is in its greatest vigor, (never mind the phase of the moon,) and keep it off of the ground until seasoned. In support of my position, I will repeat two instances which have lately come to my knowledge. A farmer in North Carolina wishing to fence a certain lot, went to work according to the old theory, and cut his rail timber during the full of the moon in February; but when he come to make his fence in May he was deficient about 40 pannels; he went into the woods and cut the necessary quantity, and put it up as the only alternative; and after some ten or twelve years, his attention being called to the fence, he found the rails cut and split in May infinitely more sound than those cut in February. Another gentleman in New England had an accident befall a gate post in mid summer, and not having any seasoned timber on hand, sent to the woods for a green one, and expecting that it would only last one or two years, had one cut during the next winter and laid by to supply the place of the green one at his leisure. But during the ensuing summer the other post failed, and the one cut, secundem artem, was taken to supply the place of the last failure, and the green post thought no more of until at the end of 7 or 8 years, when the post last put in was found to fail, while the summer cut post was in a perfect state of preservation.

These hints are not prepared with sufficient care for publication, but are only intended as hints for you to reflect upon, &c.

With great respect, yours,

JOSHUA HOWARD.

Dearbornville. Sept. 3, 1835.

* The great limestone ridge which separates the levels of lakes Erie and Ontario at Lewiston is usually called "the Mountain."

Cantua Coronopifolia.

BY T. S. P.

This exquisite biennial, a native of South Carolina and Georgia, has only begun to attract the attention of Horticulturists in the northern states, within a few years past. In the Boston publications of last spring, it is mentioned (under the name of *Gilia coronopifolia*) as amongst the latest and rarest importations of plants.

In the southern states it has been cultivated and admired for a longer period: indeed I have been informed by N. Herbemont, of Columbia, S. C., that he introduced it into his garden thirty-five years ago; and that he has, during that time, freely distributed the seed amongst his correspondents, in Europe as well as in the United States. To him, therefore, either directly or indirectly, the admirers of Flora are, no doubt, indebted for the acquaintance they have made with this, one of her choicest productions.

The Cantua grows to the height of four or five feet, sometimes putting up only a single stem, but more frequently branching from the crown of the root. The foliage is dense and pinnatifid, bearing a considerable resemblance to that of the Cypress vine (*Ipomea quamoclit*)—the corols are about an inch in length, tabular, and very numerous, bright red without and yellow within, the divisions being delicately dotted with red. They are arranged along the greater portion of the stem in a raceme or rather panicle, and exhibit their lovely charms for a length of

time. The plants will stand unprotected in the open ground without injury during the severest winter.

The different ways in which the Cantua may be trained, in addition to its intrinsic beauty, render it highly ornamental in the flower garden. Some support is necessary to prevent it from being prostrated in times of wind or rain. A simple stake, an inch square, is sufficient to mantain one plant in an erect position; and a cluster or group trained in this manner presents a fine appearance: But when the plants are set in a short row or border at the distance of two feet, and supported by strings attached to a line of small stakes, like the sloats of a trellis, they show to better advantage than any other mode I have adopted. T. S. P.

Beaverdam, Va., 9 mo. 4, 1835.

P. S. Will the Editor of the Farmer or any of his correspondents, be so good as to state in what way the tupelo or black gum (Nyssa multiflora) may be transplanted with *safety?* All my attempts at removal have been truly "Love's labor lost." The beautiful and compact foliage, and regular outline of this tree—almost as regular as a mathematical figure—render it a distinguished ornament in a situation where it has ample room for development.

On the Preservation of Organic Substance.

Dryden Cottage, London District, U. C. September 4th, 1835.

Mr. Tucker—Accompanying this is the "Extract" promised in my last; which I trust you will find sufficiently interesting to be placed in your pages. There was an error in the printing of the last letter I sent you; you have put *fluvoise* for *pluvoise*. In haste yours, Veritas.

"*Decomposition.*—The compounds which are spontaneously formed by organic bodies, both vegetable and animal, are of a different nature from those which exist in unorganized matter. They are the peculiar results of vital processes, and neither their structure nor composition can be imitated by art. During life, the elements of organic bodies are held together by vital affinities, under the influence of which they were originally combined. But no sooner does life cease, than these elements become subject to the laws of inert matter. The original affinities, which had been modified, or suspended, during life, are brought into operation; the elementary atoms react upon each other, new combinations are formed, and the organized structure passes sooner or later into decay. The rapidity with which decomposition takes place in organic bodies, depends on the nature of the particular substance, and upon the circumstances, under which it is placed. Temperature, moisture, and the presence of decomposing agents, greatly affect both the period and extent of this process. By regulating or preventing the operation of these causes, the duration of most substances may be prolonged, and many materials are rendered useful, which if left to themselves, would be perishable and worthless. The preservation of timber, of fibrous substances, of leather, of food, and of various objects of art, are subjects of attention from scientific experimentalists.

Temperature.—The influence of temperature, in accelerating or retarding the decay of organized substances, is generally known. Cold tends to check the progress of destructive fermentation, and when it extends so far as to produce congelation, its preservative power is complete. Bodies of men and animals have been found frozen, in situations where they had remained for years, and even ages; and the recent discovery of an elephant in the ice of Siberia, shows that the period of this preservation is unlimited. On the other hand, in warm seasons and in hot climates, every thing tends to corruption and decay. Both animal and vegetable substances, pass rapidly into the putrefactive fermentation; alimentary substances are difficult to preserve, and when moisture is combined with heat, ships, houses, and other structures of wood, as well as cordage, canvass, and clothing, have the period of their duration greatly abridged.*

Timber.—A vast expense is every year created by the premature decay of wood, employed in ships and other structures, which are exposed to vicissitudes of weather, and especially if they are subjected to the influence of warmth, combined with moisture.

Trees of different species, vary greatly in the durabilty of their wood, yet none of the species commonly employed, are capable of withstanding, for many years, the effect of unfavourable exposures and situations. The decay of timber is sometimes superficial, and sometimes internal. In the former case, the outside of the wood first perishes and crumbles away, and successive strata are decomposed, before the internal parts become unsound. In the other species, which is distinguished by the name of the "dry rot," the disease begins in the interior substance of the wood, particularly of that which has not been well seasoned, and spreads outwardly, causing the whole mass to swell, crack, and exhale a musty odor. Different fungous vegetables sprout out of its substance, the wood loses its strength, and crumbles, finally, into a mass of dust.

The middle of summer and the middle of winter are undoubtedly the periods when the wood contains least sap, and these periods ought to be selected for felling it.

Seasoning.—At whatever period timber is felled, it requires to be thoroughly seasoned, before it is fit for the purposes of carpentry. Two or three years seasoning is requisite to produce tightness and durability in the wood work of buildings. It must be observed that seasoning, in the common way, only removes a portion of the aqueous and volatile matter from the wood. The extractive and other soluble portions still remain, and are liable to ferment, though in a less degree, whenever the wood reabsorbs moisture. Such, indeed, is the force of capillary attraction, that wood, exposed to the atmosphere in our climate, never gives up all its moisture.

Preservation of Timber.—The methods which have hitherto been found most successful, consist in extracting the sap, in excluding moisture, and in impregnating the vessels of the wood with antiseptic substances. For extracting the sap, the process of water seasoning is recommended. It consists in immersing the green timber in clear water for about two weeks, after which it is taken out and seasoned in the usual manner. A great part of the sap, together with the soluble and fermentable matter, is said to be dissolved or removed by this process. Running water is more effectual than that which is stagnant. It is necessary that the timber should be sunk, so as to be completely under water, since nothing is more destructive to wood than partial immersion. Mr. Langton,* has proposed to extract the sap by means of an air pump, the timber being inclosed in tight cases, with a temperature somewhat elevated, the sap being discharged in vapor by the operations of the pump. The charring of timber by scorching, or burning its outside, is commonly supposed to increase its durability, but on this subject the results of experiments do not agree. Charcoal is one of the most durable of vegetable substances, but the conversion of the surface of wood into charcoal, does not necessarily alter the character of the interior part. As far, however, as it may operate in excluding worms, and arresting the spreading of an infectious decay, like the dry rot, it is useful. Probably, also, the pyroligneous acid, which is generated when wood is burnt, may exert a preservative influence. The exclusion of moisture by covering the surface with a coating of paint, varnish, tar, &c., is a well known preservative of wood which is exposed to the weather. But painting is no preservative against the internal or dry rot. Paint itself is rendered more durable, by covering it with a coating of fine sand. Wood should never be painted which is not thoroughly seasoned. The impregnation of wood with tar, bitumen, and other resinous substances, undoubtedly promotes its preservation. It is frequently the custom in this country, to bore a perpendicular hole in the top of a mast, and fill it with drying oil. This fluid is gradually absorbed by the vessels of the wood, and penetrates the mast to a great distance. Animal oils, in general, are less proper for this purpose, being more liable to decomposition. The preservative qualities of common salt (muriate of soda) is well known. An example of its effects is seen in the hay of salt marshes, which is frequently housed before it is dry, and which often becomes damp afterwards from the deliquescence of its salt, yet remains unchanged for an indefinite length of time. In the salt mines of Poland and Hungary, the galleries are supported by wooden pillars, which are found to last unimpaired for ages, in consequence of being impregnated with the salt, while pillars of brick and stone, used for the same purpose, crumble away in a short time by the decay of their mortar. In canals which have been made in the salt marshes about Boston and other places, trunks of oak trees are frequently found with the heart wood entire and fresh, at a depth of five or six feet below the surface. At Medford, Mass. the stumps of trees are found standing in the gravelly bottom of the salt marsh where the tide rises in the canals four or five feet above them. This bottom must originally have constituted the sur-

* The Lecturer here goes on to make some very luminous remarks on the effects of dryness, wetness, and of antiseptics on organic bodies; but, as I fear the extracts will be too long, I must omit them and proceed with his remarks on timber.

* Repertory of Arts, 1826. Franklin Journal, ii. and vi.

† The British frigate Resistance, which went down in Malta harbor, and the Eden, which was sunk in Plymouth Sound, were both affected with dry rot. These ships, after remaining months under water, were raised, and it was found that the disease was wholly arrested.

face of the ground, and must have settled long enough ago for the marsh mud to have accumulated, as it has done for miles round, apparently since that period. There are some experiments which appear to show, that after the dry rot has commenced, immersion in salt water effectually checks its progress, and preserves the remainder of the timber.† In some of the public ships built in the United States, the interstices between the timbers, in various parts of the hull, are filled with dry salt. A variety of other substances besides common salt, act as antiseptics in preventing the dry rot, and the growth of the fungus which attends it. Niter and alum have been recommended for this purpose, and some of the metallic salts are considered still more effectual. Of these, the sulphates of iron, copper and zinc, have the effect to harden and preserve the timber. Wood boiled in a solution of the former of these, and afterwards kept some days in a warm dry place, is said to become impervious to moisture. Corrosive snblimate, which is recommended by Sir H. Davy, is a powerful preservative of organized substances from decay, and proves destructive to parasitic vegetables and animals; but its safety, in regard to the healths of the crews if used in large quantities about the wood of a ship, may be considered as doubtful.

"An opinion has been supported in this country, that the decay of timber in ships, by dry rot, is owing to the impure atmosphere generated by bilge water, and that it is to be remedied by constructing ships with a view to their free and effectual ventilation."

The lecturer then goes on to make remarks upon the preservation of animal textures, &c. but I dare say you will agree with me in thinking the extract quite long enough already.

VERITAS.

From the Cultivator.

On the Manufacture of Cider.

The quality of cider depends on several contingencies, among which may be reckoned,

1. The species of fruit employed;
2. The soil and aspect of the orchard;
3. Condition of the fruit;
4. The process of grinding;
5. Management of the vinous fermentation; and
6. The precautions which are taken to prevent the acetous fermentation.

We shall offer some brief remarks under each of these heads. And,

1. *The Fruit.*—Apples differ not only in their flavor, color, and time of ripening, but in the proportions of their constituent parts. The most material of these constituent parts are acid, sugar, astringency, vegetable extract and water. The properties of good dessert and cider apples are seldom found united, though they are not incompatible with each other. Table apples are esteemed on account of their bland and aromatic flavor, crisp and juicy pulp, and for the property of keeping long, or ripening late. The characteristics of a good cider apple are, a red skin; yellow and often tough and fibrous pulp, astringency, dryness, and ripeness at the cider making season. "When the rind and pulp are green, the cider will always be thin, weak and colorless; and when these are deeply tinged with yellow, it will, however manufactured, or in whatever soil it may have grown, almost always possess color, with either strength or richness."—(*Knight.*) The apple, like the grape, must attain a state of perfection, or perfect maturity, before its juices develop all their excellence; and as many of our best eating apples do not acquire this maturity until winter or spring, this affords a satisfactory reason why winter fruit is seldom or never good cider fruit. In a dry apple the essential elements of cider are generally more concentrated, or are accompanied with a less proportion of water, than a juicy one; of course the liquor of the former is stronger than that of the latter. Of our best cider apples, ten or twelve bushels of fruit are required for a barrel of juice; while of the ordinary juicy kinds, eight bushels generally suffice.

The only artificial criterion employed to ascertain the quality of an apple for cider, is the specific gravity of its *must* or unfermented juice;—or its weight compared with that of water, This, says Knight, indicates, with very considerable accuracy, the strength of the future cider. Its weight and consequent value is supposed to be increased in the ratio of the increase of saccharine matter. In making wine of domestic fruit, say of the current or gooseberry for example, we use sugar till the unfermented liquor attains a certain specific gravity; or until the saccharine matter of the fruit and that artificially supplied, bears a certain proportion to the water. This ensures to the liquor strength, or body, as the sugar is converted into spirit by the fermentive process.

The specific weight of the must of apples differs materially. That of some varieties is lighter than distilled water, while the juice of others is materially heavier. Taking water at 1.000 as the standard, the Redstreak, Styre, and others of the old cider varieties, afforded a must of the specific gravity of 1.060 to 1.079, and some of the new varieties, produced by Knight as the Downton, Foxley, Siberian Harvey, &c. of 1.080 to 1.091.

2. *Soil and aspect.*—The apple, like the grape, is known to take much of its character from the soil on which it grows. The best cider orchards in England, are on a stratum of red marle which stretches across the island. The soil in Herefordshire, highly reputed for its ciders, is an argillaceous, or clay marle. And Knight says, the strongest and most highly flavored cider which has been obtained from the apple, was produced from fruit growing on a shallow loam, on limestone basis. All the writers upon the subject seem to agree, that calcareous earth should form a component part of the soil of a cider orchard. It appears to have the effect of mitigating the harshness of rough and austere fruits, and of neutralizing the juices of those which are too acid. Coxe says, the soil which grows good wheat and clover, is best for a cider orchard. Our own observation would induce me also to prefer a dry and somewhat loose soil, in which the roots, destined to furnish food for the tree and fruit, may penetrate freely, and range extensively, in search of nutriment. The juices of plants and fruits are always more concentrated when growing on a dry than on a wet soil. Mint, or other aromatic herbs, is much stronger in the specific virtues of the plant, when grown on a dry soil, and greater in volume, when grown on a wet one. The maple yields the sweetest sap, though less in quantity, on a dry soil. Apples may grow large on a moist alluvial; but the fruit will neither be so abundant nor so rich as on a dry soil. The thriftiest trees produce the most wood buds; those less thrifty the most fruit buds. The best aspect for an orchard is one somewhat elevated or undulating—protected from prevailing cold winds—and facing the south, south-east or east. Ciders brought to the Albany market, from the hilly towns of Columbia and Saratoga, on the transition formation, possesses the most spirit, best flavor, and resist longest the acetous fermentation.

3. *Condition of the fruit.*—Fruit should be used when it has attained its perfect state of maturity, and before it begins to decay, because it then yields the greatest proportion of saccharine matter. The most certain indications of ripeness, says Crocker, is the fragrance of the smell, and the spontaneous dropping from the tree. Each kind of the apple should be manufactured separately, or those kinds only mixed which ripen at one time, and which experience shall show, are not prejudicial to each other. Who would ever think of making a superior wine from an indiscriminate mixture of a dozen kinds of grapes? And yet we seem to expect good cider from an indiscriminate mixture of a dozen kinds of apples. It may be urged, that the evil is irremediable, because our orcherds, containing these dozen varieties, have been furnished to our hands; and that neither the quantity nor quality of any kind of fruit renders it an object to manufacture it separately. Is it not time, then, to set about correcting the evil, by selecting only the best kinds for new plantations? A farmer should make cider to sell, and it is material to him whether he obtains two or ten dollars the barrel. Our manufactories, our towns and cities, and the demand for exportation, will always ensure a market and price for good ciders. Mr. Wynkoop, of Lancaster, Pa. has 400 trees of the Virginia crab, on less than five acres of ground; and when his orchard was twenty-two years old, he stated to the President of the Pennsylvania Agricultural Society, that it produced him every other year forty hogshead of cider, of 112 gallons each; which he sold at Philadelphia at 2s. 6d. the gallon, or about $1,500 in the gross. And yet this apple is not a first rate cider apple. It is deficient in sugar, but abounds in astringency, rather a keeping than an enriching quality. What farmer can apply his land to better profit? Wines differ as much in their quality and price as ciders. Fruit, soil and skill, make the difference in both; and upon the proper selection and exercise of those depend the quality of the liquor, and the consequent profits of the cultivator. Upon this branch of the subject, I will only add, that the apples should ripen upon the tree, be gathered when dry, in a cleanly manner, spread in an airy covered situation, if practicable, for a time, to induce an evaporation of aqueous matter, which will increase the strength and flavor of the liquor, and be separated from rotten fruit and every kind of filth before they are ground.

4. *Grinding, &c.*—The apples should be reduced by the mill, as nearly as possible, to a uniform mass, in which the rind and seeds are scarcely discoverable; and the pomace should be exposed to the air from twelve to twenty-four hours, according to the temperature, before it is pressed. The juices of the rind of fruit, as may be instanced in the orange and lemon, are highly concentrated; and those of the rind of the apple have a material influence, with the aromatic bitter of the seeds, upon the flavor and strength of the liquor.

On partially macerating the pulp of an apple, and subjecting it to immediate pressure, the juice which escapes will be found to be thin, nearly colorless and devoid of flavor. If the maceration is perfect, so as to crush the seeds and break down the rind, the strength, color and flavor of the must will be improved: and if the macerated pulp is exposed for a few hours, to the atmosphere, and then subjected to pressure, these desirable properties in the liquor will be found to be still further augmented. "By the chemical action of the roller," says Knight, "the various fluids which occupy the different vessels and cells of the fruit are mingled with the juices of the rinds and seeds, and with the macerated substance of the vessels and cells themselves. In such a mixture it seems probable that new elective attractions will be exerted and compounds formed, which did not exist previously to the fruit being placed under the roller; and hence the most correct analysis of the expressed juices will convey but a very imperfect degree of knowledge of the component parts of the different fluids, as they existed in their state of separation within the fruit. I have often extracted," he continues, "by means of a small hand press, the juice of a single apple, without having previously bruised it to pieces; and I have always found the juice thus obtained, to be pale and thin, and extremely defective in richness, though the apple possessed great merit as a cider fruit. I have then returned the expressed juice to the pulp which I have exposed, during a few hours, to the air and light: and the juice has then become deeply tinged and very rich. In the former state it apparently contained but a very small portion of sugar; in the latter it certainly contained a great quantity;

much of which I believe to have been generated subsequently to the juice having been subjected to the action of the press; though it may be difficult to explain satisfactorily the means by which it could have been produced." Knight ascertained, by a subsequent experiment, that by exposing the reduced pulp to the operation of the atmosphere, for a few hours, the specific gravity of the juice increased from 1.064 to 1.073; and from the experiment being repeated in a closed vessel with atmospheric air, he ascertained the accession to be oxygen, which according to Lavoisier, constitutes 6 i per cent. of sugar. For fine cider, he recommends that the fruit be ground and pressed imperfectly, and that the pulp be then exposed twenty-four hours to the air, being spread, and once or twice turned, to facilitate the absorption of oxygen, that it be then ground again, and the expressed juice be added to it before repressing. In straining the must, too much care cannot be taken to exclude the pulp, as its presence is apt to render the fermentation too violent, and drive it into the acetous stage. A hair seive, filled partly with straw, answers the purpose well. The mill which most effectually reduces the pulp is to be preferred. It has been remarked with much force, that cider mills should, like schoolhouses, be limited to one in a district. In this way, it would be an object with the owner to render his implements complete, and to conduct the process with care and skill. And as the value of the cider depends so much upon its being well made, it is believed the owners of the fruit, as well as the purchasers of the cider, would be benefitted by such an arrangement.

5. *Vinous fermentation.*—This is commonly called *working*. It commences at the temperature of 59° Fah. and cannot be conducted in safety when the heat is over 75°, for a high temperature induces a too rapid fermentation, by which much of the spirit passes off with the disengaged carbonic acid gas, and the acetous or vinegar fermentation begins at 77°. This will show the importance of conducting the vinous fermentation under a proper temperature, which is from 50 to 70° of Fah. To show the chemical effect of the vinous fermentation it will be proper to repeat, that the unfermented juice, or *must*, of the apple, consists of saccharine matter or sugar, vegetable mucilage or extract; astringency or tannin; malic, and a small matter of gallic acid, the principle of flavor, tinging or coloring matter, and water. The sugar becomes the basis, or spirit, of the fermented liquor; the spirit, after vinous fermentation, and the tannin, or astringent matter, preserve it from the acetous fermentation, if the vegetable mucilage or yeast, is separated when it has performed its office. This vegetable mucilage acts upon the saccharine matter in a manner analagous to yeast upon the wort of the the brewer--it causes fermentation, and converts sugar into spirits—by its giving off carbonic acid gas, and imbibing hydrogen—the liquor becomes clear, and part of the mucilage rises to the surface with the disengaged air, in the form of froth, and the residue is precipitated, with the heavier impurities, to the bottom, in the form of sediment or lees. This is the critical period. The liquor may now be drawn off clear. If left longer, the feculent matter, or froth, by parting with the gas which renders it buoyant, soon settles and mixes with the liquor, renders it turbid, and as soon as the temperature attains a proper height, causes a new fermentation. This will explain the reason why ciders become harsh and sour on the approach of warm weather in the spring. The elementary principle of sugar, ardent spirits and vinegar, it has been ascertained by the experiments of Lavoisier, are the same; and these substances only differ in the proportion of their component parts, and in the modes of their chemical union. Sugar consists of hydrogen, oxygen and carbon. An increased proportion of hydrogen enters into the composition of ardent spirits, and of oxygen into vinegar. The same agent, vegetable mucilage, which converts the sugar of the apple into spirits, will convert the spirits into vinegar, under a proper temperature, and aided by the oxygen of the atmosphere. The process of making vinegar is greatly accelerated by exposing cider or wine to the atmosphere, the oxygen of which it imbibes, and which is termed by chemists, the great acidifying principle. Here again we see the propriety of professional cider manufacturers, who might be provided with cellars where the temperature could be regulated, and who would carefully rack off the liquor at the completion of the vinous fermentation.

The vinous fermentation commences and terminates at different periods, according to the condition and quality of the fruit, and the state of the weather. The juice of unripe fruit, if the weather be warm, will begin to ferment in a few hours after it passes from the press; and seldom stops at the vinous stage. The juice of ripe fruit, when the temperature is lower, does not begin to ferment under a week or fortnight, or longer, often continues slowly through the winter, and when made from some of the finer cider apples, is not completed under six or nine months. Indeed, in some cases the liquor does not become clear under a year, and the sugar is not wholly decomposed under two years; for the whole of the sugar is seldom decomposed during the first sensible fermentation. Knight considers cider at two years old as in the best state for bottling. For until the sugar is decomposed, fermentation insensibly goes on, and the strength of the liquor increases. The like insensible process goes on in wines, and when it is completed, the wines are said to be ripe, and are in their highest state of perfection. (*See M'Culloch.*) Temperature being the same, we think it may be assumed as a rule, that fermentation will be rapid and short, in an inverse ratio to the proportion which the saccharine matter bears to the mucilage and water; and that the vinous liquor will be rich, high flavored and durable, in proportion as the sugar and astringency preponderate in the must.

6. *Precautions to prevent acetous fermentation.*—These are, supposing the previous contingenies to have been favorable, a careful separation of the vinous liquor from the froto and lees,—a cool temperature,—racking and fining,—and artificial means to destroy the fermenting quality of the remaining mucilage.

We have already suggested the importance of drawing off the liquor from the scum and sediment—at the termination of the vinous fermentation. This period may be known by the cracking of the froth in an open cask, or, if in a close one, by the application of the nose or ear to the bung hole. If the fermentation has not ceased, a hissing will be apparent, and the gas given off will give a pungent sensation to the nose. If the liquor is not sufficiently clear, or indications appear of the acetous fermentation having commenced, the cider should be racked into clean strong casks, and fined with isinglass, eggs, or skimmed milk. This oparation may be repeated, if found necessary; but it should be performed in clear cold weather. After the first racking, the casks should be kept bunged close, and further racking be avoided if possible, as every racking reduces its strength, and much of the spirit escapes with the carbonic acid gas which is evolved in the fermentive process. The oxygen of the atmosphere, besides, increases the vinegar fermentation. But if these methods fail, resort may be had to the means of impeding the natural operations of the mucilage, or vegetable leaven. This may be done by what is called *stumming*, that is, burning a rag impregnated with sulphur, in the cask in which the liquor is to be decanted, after it has been partly filled, and rolling it so as to incorporate the liquid with the gas; or by putting a drachm or two of sulphate of potash into each cask, which will precipitate and render insoluble the remaining leaven. If the fruit is good, and properly ground, and the cider racked from the fermenting casks at a proper time, most or all of the subsequent operations will be superseded.

The vinous fermentation is here considered as embracing the whole process till the sugar is converted into spirits. This may be subdivided: the production of sugar being termed the *vinous*, and the conversion of sugar into spirit, the *spirituous* fermentation.

NEW-YORK MARKET.

Week ending Sept. 12.

ASHES—We noticed an advance in ashes last week; since then there has been much activity and a steady improvement. Pots sell freely at 4 80, and Pearls at 6 25. The Havre market was bare at the last advices.

FLOUR—The supplies arriving have been rather light which has rather reduced the stock. The demand has been better for home consumption and export, and all descriptions stand full 12½ cents better than they did last week—and common brands western sell freely at $6—and fancy at 6,12—Southern is in better request, sales of Georgetown and Howard st. at $6,50. The following are the operations of the week.

FURS—The supplies from the west are considerab'e, but there are no public sales making.

GRAIN—Corn has been in active demand, and full fifteen thousand bushels sold. Northern at 100 cts. and Maryland at 90 cts, Considerable sales of Rye at 106 cts—market rather drags. Wheat—only one small cargo has been here; that was from North Carolina, and sold at 125 cts.

HEMP—There is none in first hands. Clean will command $182.

WOOL—The transactions of the week have been tolerably extensive at fair rates. Low grades of fleece and pulled wool continue scarce.

Plum and Peach Stones Wanted,

FOR which a liberal price will be paid at the Rochester Seed Store.

sep 5-a6tf4t REYNOLDS & BATEHAM.

To Capitalists.

THE undersigned having been engaged for a number of years past in the Linnæan Garden and Nurseries at this place, in a department where he has had every opportunity of becoming thoroughly acquainted with the business, wishes to form a connection with some person of capital, either as active or silent partner, for the purpose of carrying on the *Nursery and Garden Seed business.* To a person wishing to engage in a lucrative business, it is an opportunity rarely to be met with. Any communication addressed to the subscriber will be treated as strictly confidential.

G. R. GARRETSON.

Flushing, L. I. Sept. 1, 1835. sept 12-2t

A Valuable Farm for Sale.

ON the Ridge Road, south side, three miles west of Sandy Creek, and within two miles of the Erie canal, in the town of Murray, Orleans county, containing 248 acres, upwards of 130 highly cultivated—buildings large and convenient. This is desirable property, being situated on the best road in this state,—the soil varied, and every variety of the very richest quality. The situation, too, is delightful. Price moderate—terms easy. Inquire on the premises of W, B. ILES.

july 11-frtf aug 29

Election Notice.

SHERIF'S OFFICE, Monroe co., }
Rochester, August 12, 1835. }

A GENERAL ELECTION is to be held in the county of Monroe on the second, third and fourth days of November next, at which will be chosen the officers mentioned in the notice from the Secretary of State, of which a copy is annexed.

ELIAS POND, Sherif.

STATE OF NEW YORK, }
Secretary's Office. } Albany, August 1, 1835.

Sir—I hereby give you notice, that at the next general election in this state, to be held on the 2d, 3d and 4th days of November next, a Senator is to be chosen in the eighth senate district, in the place of Chauncey J. Fox, whose term of service will expire on the last day of December next.

Notice is also given, that at the said election the following proposed amendments to the constitution of this state will be submitted to the people viz:

For restoring the duties on goods sold at auction, and the duties on salt to the general fund.

JOHN A. DIX, Secretary of State.

To the Sherif of the county of Monroe.

N. B. The Inspectors of Election in the several towns in your county wil give notice of the election of Members of Assemblly and for filling any vacancies in county offices which, may exist. aug 15

Miscellanies.

BALL'S CAVE, SCHOHARIE.—It was supposed when this cave was first explored, a few years ago, that there was very little prospect of making any further discoveries. But new discoveries have recently been made of an interesting character.

Our readers may remember, that in the account we gave in our columns, of this cavern, there was a description of an apartment denominated the Rotunda. In digging in one of the small rooms north of this apartment, Mr. John S. Bonny informs us that he saw two passages worn in the ceiling by the water, as he supposed, which were about 3 feet wide, and 1½ feet deep, running in a northerly direction. In digging in one of these passages which was filled with earth to the ceiling, he found large slabs of the purest alabaster; some of which were 10 feet in length, 4 feet wide and a foot thick. Other slabs contained grodes most beautifully crystalized, and from 2 to 10 stalagmites on them. The whole passage was filled with stalagmites, stalactites and alabaster formations of every description. "After digging in a northerly direction about 70 feet," says Mr. B., we came to another apartment, from which we took the largest stalactite ever taken from the cave. It weighs about eighty pounds, and is now in my possession. The apartment is about 20 feet long, from 15 to 20 feet wide, and about 10 feet high. It is literally filled with alabaster formations. The day we got into the new apartment, Mr. Gibhard assisted."—*Schenectady Reflector.*

INDELIBLE INK.—The juice which exudes from a leaf or stem of ivy, forms an ink which is perfectly indelible, and may be used for marking linen. Washing and exposure to the air will not cause it to fade.—*Ib.*

THE TOMATO.—Dr. Bennett, the professor of midwifery, and the diseases of women and children, hygeine and acclimatement, in the medical college of Lake Erie, which is the medical department of the Willoughby university of Lake Erie, at Chagrin, Cuyahoga county, Ohio, in his public introductory lecture recently delivered in that flourishing institution, made the following statement relative to the Solanum Lycopersicum, or as it is generally called, Tomato, Love Apple, Jerusalem Apple, &c. to wit:

1st. That it (the tomato) is one of the most powerful deobstruents of the materia medica, and that in all those affections of the liver, and other organs where calomel is indicated, it is probably the most effective, and least harmful remedial agent known to the profession.

2d. That a chemical extract will probably soon be obtained from it which will altogether supercede the use of calomel in the cure of disease.

3d. That he has successfully treated serious diarrhæ with this article alone.

4th. That when used as an article of diet, it is almost a sovereign remedy for dyspepsia, or indigestion.

5th. That persons removing from the east, or north, to the west or south, should by all means make use of it as an aliment, as it would in that event, save them from the danger attendant upon those violent bilious attacks to which almost all unacclimated persons are liable.

6th. That the citizens in general should make use of it, either raw, cooked, or in the form of a catsup, with their daily food, as it is the most healthy article of the materia alimentaria, &c.

Now if these positions be true, it is of the utmost importance that the public should be made acquainted with the facts, and it is with this view that I now make this communication for the press.—*Albany Evening Journal.*

SAGACITY OF THE ELEPHANT.—And now for an instance of self-denial, which I have often witnessed on the part of my friend, the large Elephant. I had observed him very busy, flapping right and left, evidently much annoyed by the mosquitoes. He showed by constant flagellation of his person, that he was much annoyed by his persecutors; and just at that time the keeper brought a little naked black thing, as round as a ball, which in India, I believe they call a child—laid it down before the animal, with two words of Hindostanee, "watch it," and then walked away into the town. The elephant immediately broke off the larger part of the bough, so as to make a smaller and more convenient whisp, and directed his whole attention to the child, gently fanning the little lump of India-ink, and driving away every mosquito which came near it; this he continued to do for upwards of two hours, regardless of himself, until the keeper returned. It was really a beautiful sight, and caused much reflection among those who observed it. Here was a monster whose bulk exceeded that of the infant at least ten thousand times, acknowledging the image of his maker, even in its lowest degree of perfection, as divine, silently proving the truth of the sacred announcement, that God had "given to man dominion over the beasts of the field."—*Boston Mercantile Journal.*

SWALLOWS.—The habits of swallows are in some respects very curious, especially the chimney swallow's manner of roosting. In Pleasant street, in this town, one of their roosting places may be seen. Just at evening they come from all parts of the neighboring country. They gather over the top of the chimney, say ten feet above its mouth, and there for a half hour perform circular evolutions, sailing round, with great rapidity, previous to entering their resting place. By and by one or two drop into the mouth of the chimney. Others soon follow, until the whole descend, like a stream of water into a tunnel. Thousands in a few minutes, which before darkened the air, have disappeared, all quietly stowed away in the chimney. They remain there during the night, clinging to the soot and piercing the interstices between the bricks with their sharp bills until dawn ensues, when they come forth again. In the chimney of a dwelling house in this town, not many years since, they lost their footholds and near two bushels fell into the fireplace.—*Southampton Courier.*

A GOOD SENTIMENT.—Children are more frequently ruined by inheriting large fortunes than by being compelled by the absence of wealth to embrace an active and industrious life, to gain a subsistence. We have always been much pleased with the answer of PHOCION, one of the most renowned philosophers and law-givers of Greece, when a friend presented him a large sum of money and pressed him to accept of it, at least for his children. "If my children," said Phocion, "resemble me, they will as well as me have enough; and if they become dissipated, I will not leave them wherewithal to maintain their luxury and debauchery."

NOURISHMENT FOR HORSES.—The practice is becoming general in Silesia, of feeding horses with bread. After an experience of four years, an intelligent husbandman is convinced of its utility in the relation of economy and health. The bread is made by taking equal quantities of oat meal and rye meal, mixing it with leaven or yeast, and adding one third of the quantity of boiled potatoes. To each horse is given 12 pounds per day, in their rations 4 pounds each. The bread is cut into small pieces, and mixed with a little moistened cut straw. By this means he saves in feeding 7 horses, 49 bushels of oats in 24 days; while the horses perform their common labor, and are much better in looks, health and disposition.—*N. E. Farmer.*

Mulberry Seed.

JUST received at the Rochester Seed Store, a quantity of new *White Italian Mulberry Seed*, gathered within the last three weeks.

As this is a good season of the year for sowing the seed, persons desirous of commencing the silk business, or increasing their present stock, will do well to obtain some of this seed, which we know is perfectly new. REYNOLDS & BATEHAM.

Rochester, July 25, 1835.

Journal of a Visit

TO the principal Vineyards of Spain and France, giving a minute account of the different methods pursued in the cultivation of the Vine and the manufacture of Wine—by James Busby, Esq.—Price 50 cents. For sale by HOYT & PORTER.

Valuable Farm for Sale.

FOR sale, that splendid farm formerly known as the "Sheldon Farm," situate on and south of Big Ridge in Greece, four miles west of Rochester, containing 240 acres—the east and north lines bounded by the Erie Canal.—160 acres are under good improvements, the remainder in wood. It is acknowledged to be one of the best *Wheat Farms* in Western New York, and more than one hundred tons of hay were cut this season on it. In fine this place will produce any of the crops generally raised in this section in great perfection. It is divided into ten fields, each field having abundance of water of easy access for stock at all times through the season. The fences, for rail fence, are not surpassed anywhere, being more than five miles, staked and capped. The buildings consist of a Brick Dwelling-house finished throughout, with wood house, well, cistern, &c.—one barn, 50 by 70 feet, capable of containing 4000 bushels of wheat in the straw, with suitable grannary, threshing machine, horse power and shed—and one stock barn, 30 by 40 feet, with a shed 20 by 50 feet, with convenient stabling for 16 head of horses and cattle. All the buildings have been erected within the last four years. On the farm is about 100 young cultivated fruit trees, which have produced some fruit this season.

For productiveness of soil, pleasantness of situation, convenience to market, and healthiness of location, this place is not excelled by any in the country. Price reasonable and title indisputable. Five thousand dollars will be required down—the balance may remain on bond and mortgage for a term of years.

For further particulars inquire of the owner residing on the premises. ELIAS BEACH.

Greece, Sept. 5, 1825. arf4w

The Silk Culturist, & Farmer's MANUAL.

"THE object of this publication is to disseminate a thorough knowledge of the cultivation of the Mulberry Tree in all its varieties, the rearing of Silk Worms, the production of Cocoons, and the reeling of silk in the most approved method."

It will also contain interesting matter on Agricultural subjects generally.

Published monthly at Hartford, Conn., by the Hartford County Silk Society, at 50 cents per year, in advance. Subscriptions received at the Rochester Seed Store, by

july 25 REYNOLDS & BATEHAM.

Monroe Horticultural Garden & NURSERY.

THE subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, &c. &c.

ALSO—A few hundred of the Morus Multicaulis, or Chinese Mulberry, the White Italian Mulberry by the hunbred or thousand, Grape Vines of both native and foreign varieties, mosty of large size, for sale by the single vine, hundred or thousand, at reduced prices. The subscriber has a large collection of Green-House Plants of choice and select varieties, and in good condition.

☞ Orders for *Mr.* Rowe's Nursery received by the Publisher of this paper.

Catalogues will be sent to those who wish them, gratis, or may be had by calling at the office of the Genesee Farmer. ASA ROWE.

Greece, *Monroe* co. N. Y. Sept. 13, 1834.

Buck for Sale.

THE subscribers offer for sale a first rate thorough bred Leicestershire Buck, their flocks having become related to him, and they on that account having imported another. He was imported four years ago, is five years old, and is a very large and beautiful animal. His stock is first rate, and may be seen in Unadilla and the adjoining towns in Otsego county, where he now is and has been kept since he was imported. At three years old his fleece weighed eleven pounds, and his carcase in September following weighed two hundred and fifty-five pounds, since which time he has not been weighed.

RICHARD MUSSSON,
DANIEL ADCOCK.

Unadilla, Otsego co., Aug. 15, 1835. aug 22-3t